

REPORT
ON THE
SANITARY CONDITION
OF THE
BOROUGH OF CAMBRIDGE,

From January 1st to December 31st, 1904.

BY

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MEDICAL OFFICER OF HEALTH.



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INDEX.

	PAGE.
Adulteration of Foods	39
Births and Birth-rate	8
Canal Boats	35
Cancer	12
Chicken Pox	14
Comparative Statistics	13
Dairies, Cowsheds, and Milkshops	35
Deaths and Death-rate, Factor of Correction	11
Diarrhœa	21
Diphtheria	14
Disinfections	38
Epidemic Mortality	11
Erysipelas	21
Estimate of Population	8
Excrement Disposal	31
Factories and Workshops	32
House Accommodation	25
Infantile Mortality	12
Influenza	12, 23
Isolations	36
Measles	22
Methods of dealing with Infectious Diseases	36
Notification	36
Nuisances	36
Overcrowding	26
Phthisis	12
Physical Features and General Character of District	25
Prophylactic Measures	38
Puerperal Fever	20
Record of Disinfection	38
Removal of Refuse	31
Results of Inspections	27
Scarlet Fever	18
School Closure, etc.	36
Slaughterhouses	31
Small-Pox	13
Sewerage and Drainage	26
Tabular Indications	38
Typhoid Fever	19
Unhealthy Dwellings	26
Water Supply	31
Weekly Record of Disease Incidence	24
Whooping Cough	23

APPENDICES.

Report on Infectious Diseases Hospital.
 Statistical Tables.
 Sketch Map of Borough, showing distribution of cases of
 Infectious Disease.

I have the honour to communicate to the Cambridge Borough Council (Urban Sanitary Authority) abstracts of the work of the Public Health Department during the year 1904.

BUSHELL ANNINGSOON.

REPORT.

I beg leave to communicate to the Cambridge Urban District Council my Annual Report for the year 1904 on “the conditions affecting health in the District and . . . the means for improving those conditions,” and in addressing myself to this task I have to point out to the Council that by the “Memorandum as to Annual Reports of Medical Officers of Health,” issued by the Local Government Board, October, 1904, I am directed to discuss prescribed subjects in definite order, and give information which may seem superfluous to the Council. The following extract from the Memorandum will make clear the intention of the Local Government Board :—

“As subjects concerning which the Board desire to obtain, through Annual Reports of the Medical Officer of Health, not only definite general information, but record also of particular changes of condition that may have occurred incidentally or by action of the local authority, the following deserve especially to be borne in mind :—

- “Physical features and general character of the District.
- “House accommodation, especially for the working classes ; its adequacy and fitness for habitation. Sufficiency of open space about houses, and cleanliness of surroundings. Supervision over erection of new houses.
- “Sewerage and drainage ; its sufficiency in all parts of the District. Condition of sewers and house drains. Method or methods of disposal of sewage. Localities where improvements are needed.
- “Excrement disposal ; system in vogue ; defects (if any).
- “Removal and disposal of house refuse, whether by public scavenger or occupiers, frequency and method,

“ Water supply of the District or its several parts, its source (from public service or otherwise), nature (river water, well water, upland water, etc.), sufficiency, wholesomeness, and freedom (by special treatment or otherwise) from risks of pollution.

“ Places over which the Council have supervision, *e.g.*, lodging-houses, slaughterhouses, bakehouses, dairies, cowsheds and milkshops, factories and workshops, and offensive trades.

“ Nuisances ; proceedings for their abatement ; any remaining unabated.

“ Methods of dealing with infectious diseases ; notification ; isolation hospital accommodation and its sufficiency ; disinfection.

“ With regard to such points it should be remembered that these reports are for the information of the Board and of the County Council as well as of the Council of the District, and that a statement of the local circumstances and a history of local sanitary questions, which may seem superfluous for the latter, may often be needed by the former bodies.”

Vital Statistics.

Vital
Statistics.
Estimate of
Population.

The population for the year 1904 has been estimated on the same principles as those enunciated in my report for the year 1902. I estimate the population of the whole Town to be 39,347, and the population of the sub-districts as follows :—

St. Andrew-the-Less	...	29,399
St. Andrew-the-Great	...	5,874
St. Giles	... ..	4,074

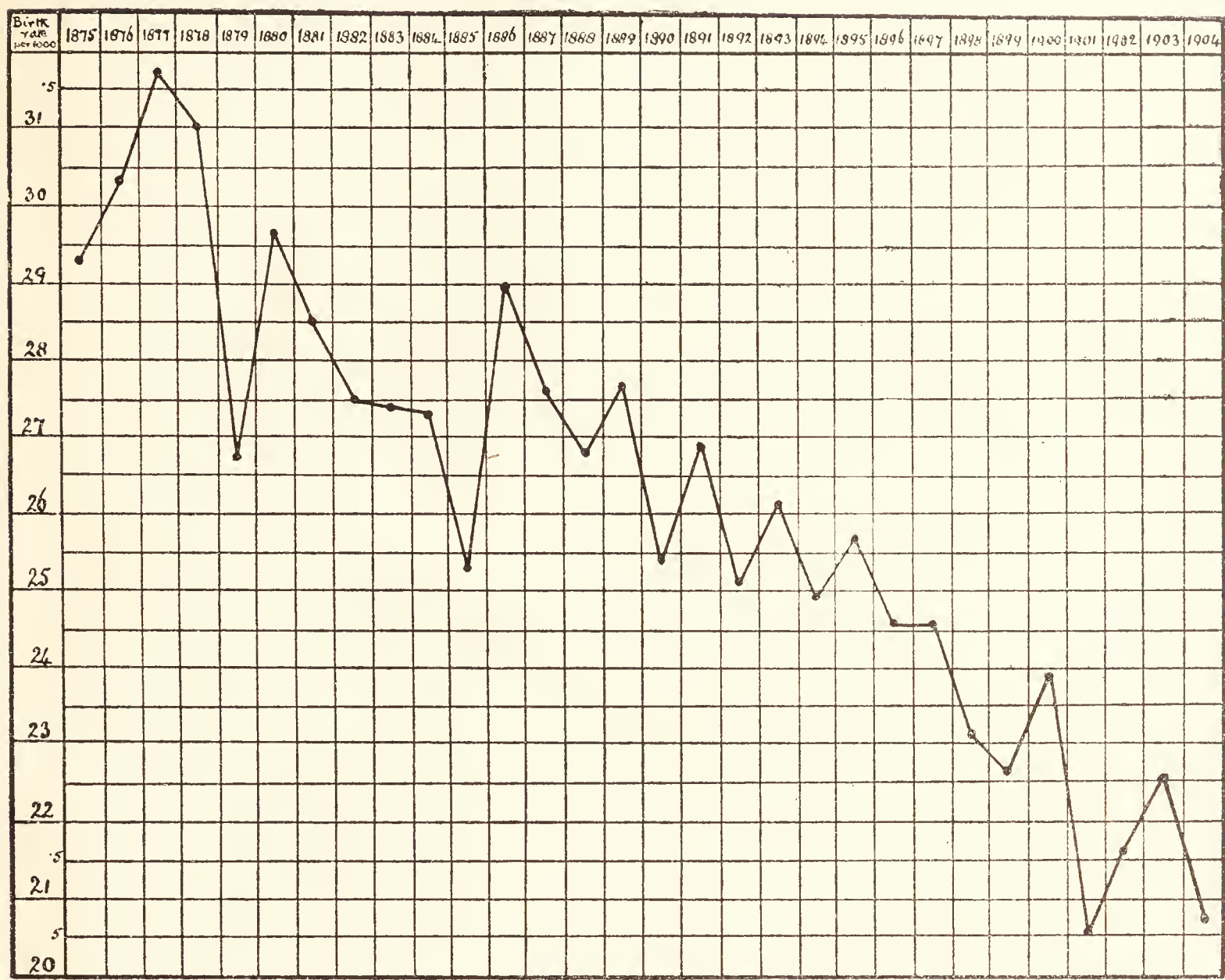
Taking the estimated population to the middle of the year as the basis of calculation, the vital statistics are as follows :—

Births and
Birth-rate.

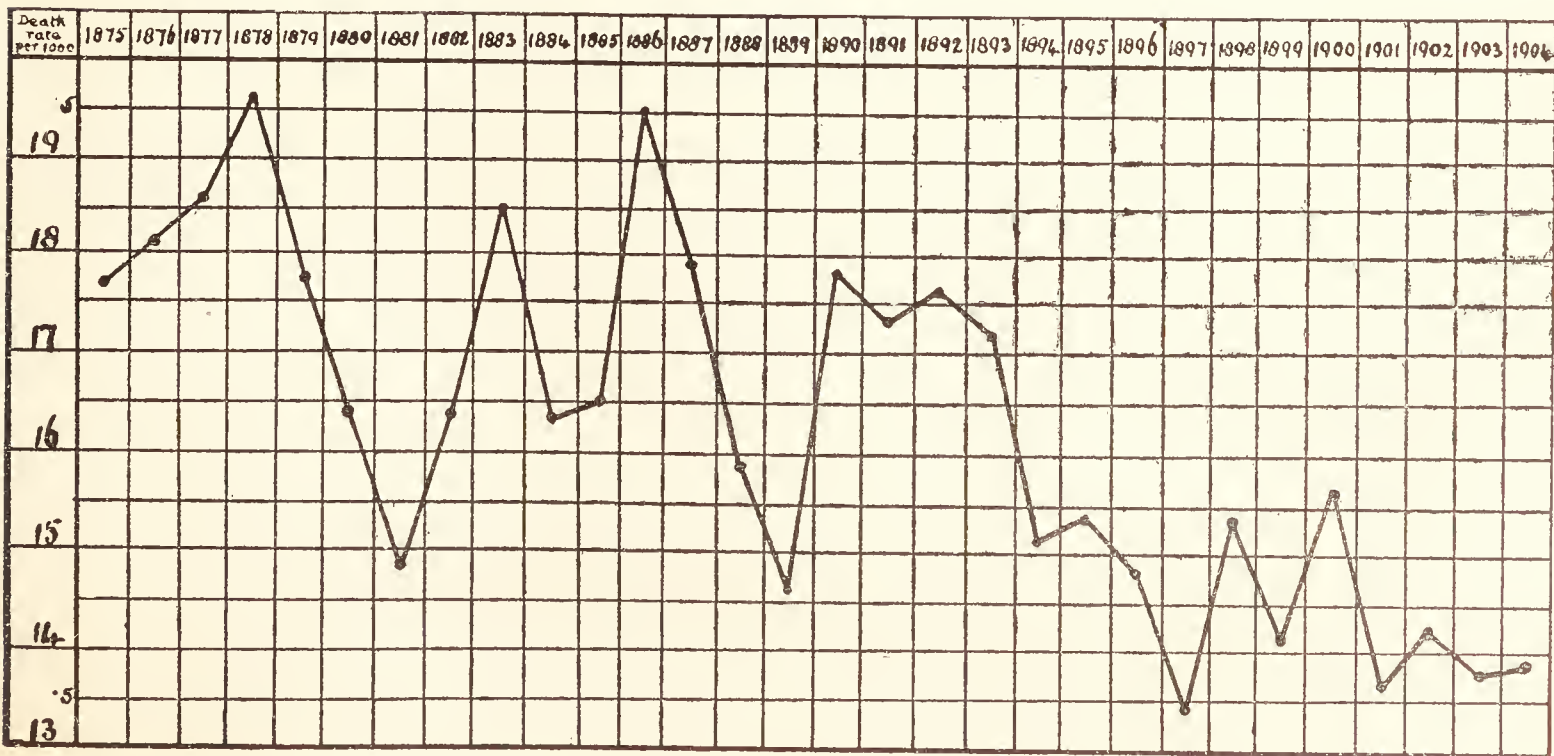
The total number of births registered is 819 (390 males and 429 females), equal to an annual birth-rate on the estimated population of 20·8 per thousand, and is the lowest rate recorded during the past ten years, with the exception of that for the year 1901, when it was 20·5. The mean rate for the previous ten years is 23·3. The birth-rate for England and Wales for the year 1904 is given in the summary of the Registrar General contained

Charts showing the Birth-rate and Death-rate of Cambridge
for each year since the year 1875.

Birth-rate.



Death-rate.



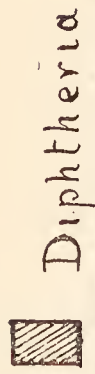
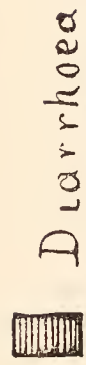
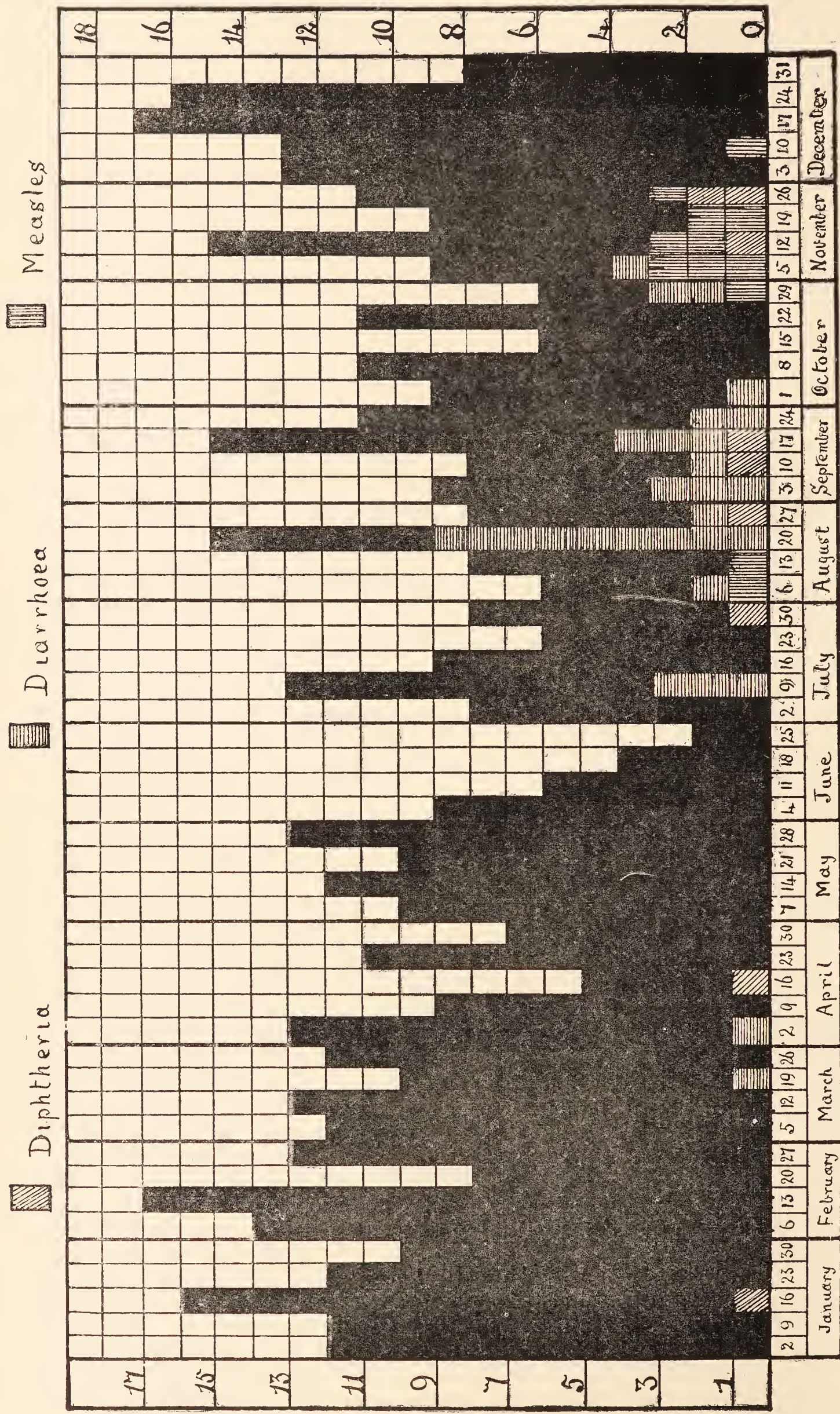


Chart showing the number of Deaths from All Causes during each week in 1904, distinguishing Deaths from Epidemic Diseases.

in the appendix to his report for the last quarter of the year as 27·9, which is 0·5 per 1,000 below the rate in 1903, and lower than the rate in any other year on record.

The total number of deaths registered is 597, equal to an uncorrected death-rate of 15·1. The deaths in Public Institutions outside the district of persons belonging thereto are 14 in the County Asylum at Fulbourn, which must be added ; while 60 of persons not belonging to the district which have occurred in Addenbrooke's Hospital and 1 in the Infectious Diseases Hospital must be subtracted. The corrected number is 550* (291 males and 259 females), or 9 more than the corresponding number in 1903, and the crude death-rate 13·9 ; after applying the factor of correction, ·994, the corrected death-rate for Cambridge is 13·8. The mean rate for the previous ten years is 14·5. The death-rate for England and Wales for the year 1904 is given as 16·2.

Deaths and
Death-rate.

Factor of
Correction.

The Chart on page 9 shows the birth-rate and death-rate for each year from 1875—1904.

The deaths belonging to the chief epidemic diseases include 9 from Diphtheria, 12 from Measles, and 29 from Diarrhœa (25 under 5 years of age), total 50, equal to a death-rate from these diseases of 1·27 per thousand of the population per annum, which is a higher rate by 0·10 than in the year 1903. The mean rate for the previous ten years is 1·39.

Epidemic
Mortality.

* This number includes 4 deaths in the St. Andrew-the-Less Sub-District, 4 deaths in the St. Andrew-the-Great Sub-District, and 2 deaths in the St. Giles Sub-District, of persons not belonging to the district, but as they did not die in a Public Institution in the District they have to be by direction of the Local Government Board included in the total number of deaths. For a like reason two deaths which occurred outside the district of persons belonging to the district (*viz.*, 1 to the St. Andrew-the-Less Sub-District, and 1 to the St. Andrew-the-Great Sub-District) are excluded. If the above corrections were made the death-rate would be 13·6.

The death-rate from these diseases in England and Wales for the year 1904 is given as 1·94.

Influenza. Influenza has contributed 7 deaths to the general mortality.

Infantile Mortality. Infantile mortality is represented by a ratio of 130 deaths under one year of age to 1,000 registered births. The mean rate for the previous 10 years is 131.

Phthisis and Cancer. The number of deaths from Phthisis and Cancer respectively, among persons belonging to the district, is 38 and 44, and the death-rate per thousand living from these diseases is 0·96 and 1·11 respectively.

The deaths and death-rate from Phthisis and Cancer respectively, among persons belonging to the district, during the previous twenty years, are set out in the following table :—

	PHTHISIS.				CANCER.			
		DEATHS.		DEATH-RATE.		DEATHS.		DEATH-RATE.
1884	...	60	...	1·67	...	31	...	0·86
1885	...	63	...	1·74	...	20	...	0·55
1886	..	67	...	1·85	...	17	...	0·47
1887	...	64	...	1·76	...	23	...	0·63
1888	...	58	...	1·59	...	27	...	0·74
1889	...	65	..	1·77	...	31	...	0·84
1890	...	78	...	2·12	...	39	...	1·06
1891	...	51	...	1·37	...	48	...	1·29
1892	...	59	...	1·59	...	30	...	0·80
1893	...	49	...	1·31	...	33	...	0·88
1894	...	58	...	1·54	...	53	...	1·41
1895	...	57	...	1·51	...	41	...	1·08
1896	...	56	...	1·47	...	42	...	1·10
1897	...	54	...	1·42	...	27	...	0·71
1898	...	45	...	1·17	...	34	...	0·88
1899	...	41	...	1·06	...	40	...	1·04
1900	...	47	...	1·21	...	44	...	1·13
1901	...	48	...	1·23	...	33	...	0·85
1902	...	42	...	1·07	...	23	...	0·59
1903	...	48	...	1·22	...	34	...	0·86
<hr/>								
Annual average for years								
1884—1903		55·5		1·48		33·5		0·89

The comparative statistics for the three areas respectively into which I find it convenient to divide the district, after distributing the deaths in the Union Workhouse, Addenbrooke's Hospital, Infectious Diseases Hospital, and the County Lunatic Asylum, to their respective areas, are appended in the following table :—

Comparative Statistics.

REGISTRATION SUB-DISTRICT.	Deaths belong- ing.	Share of W.H.	A.H.	I.D.H.	County Asylum.	Total.	Birth- rate.	Death- rate.
S. Andrew-the-Less ..	340	28	35	5	10	418	23·8	14·2
S. Andrew-the-Great ..	65	3	7	1	1	77	9·5	13·1
S. Giles	37	2	13	..	3	55	14·9	13·5
Entire District	442	33	55	6	14	550	20·8	13·9

Disease Incidence.

Disease of an infectious character has been less prevalent than during the past two years. The total number of cases notified during the year is 183 (9 fatal), equal to a case-rate per thousand of the population of 4·6. The number of cases notified during each of the ten years, 1894—1903, is as follows : 180 in 1894, 137 in 1895, 178 in 1896, 171 in 1897, 217 in 1898, 226 in 1899, 276 in 1900, 172 in 1901, 256 in 1902, and 550 in 1903 ; total, 2,363, equal to a mean case-rate per thousand of the population of 6·16.

Disease Incidence.

No case of Small Pox has been notified in the district during the year, but on January 15th I received a communication from the Commandant of the Discharge Depôt of Gosport that a man giving

Small Pox.

his address in Cambridge had disembarked from ss. Soudan, from which a case of Small Pox was landed at Malta on the 6th of the same month. The man was duly kept under observation for the usual period, and did not develop the disease.

The number of cases of Small Pox notified, and the number of deaths registered, in the district during each of the ten years 1894—1903, are set out in the following table :—

	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	Total.
Cases ..	2	1	1	—	—	—	—	—	2	132	138
Deaths ..	—	—	—	—	—	—	—	—	1	15	16

Mean case rate 0·36 ; mean mortality rate 0·04.

Ten years deaths per cent. of cases 11·5.

Chicken Pox.

Chicken Pox, which was added to the Schedule of notifiable diseases in September, 1903, continued in operation till the end of January, 1904, and 35 cases in 31 households have been notified. All the cases were at once visited and enquiries made as to vaccination, etc. In all instances the patients were found to be suffering from this disease.

Diphtheria.

Diphtheria has been present more or less during every month of the year, 39 cases (10 fatal) in 35 households having been notified ; equal to a case-rate per 1,000 of the population of 0·99.

The cases may be considered under the following heads :—1, imported cases ; 2, cases arising from school assemblage ; 3, cases due to social intercourse ; 4, doubtful cases ; 5, secondary cases in households ; 6, cases in which the source of infection could not be traced ; 7, cases in Addenbrooke's Hospital.

With regard to 1.—During the year 6 cases of Diphtheria in 6 households were distinctly imported ; the first was that of a visitor from King's Lynn, who was notified a few days after arrival as suffering from the disease, but bacterial examination of a



Chart showing the number of cases of all Infectious Diseases notified during each week of the year 1904, and of three specially selected Diseases, viz., Scarlet Fever, Diphtheria, and Enteric Fever.

rubbing from the throat failed to substantiate the diagnosis. The second case was undoubtedly imported from Oxford. The third case was that of a visitor who had a week before the onset of the disease come from a house at Barnet where it is stated there had been a case of this disease. The fourth case, which proved fatal, was that of a child who had been on a visit to Yarmouth and London, and may possibly have incepted the disease at one of these places ; as she had been attending one of the Cambridge schools a week antecedent to the onset of the illness, it is possible that she may have introduced the disease into the school, as other cases connected with this school followed. The fifth case was possibly introduced from Shrewsbury. The sixth case, which proved fatal, was that of a visitor to the town who was staying in a part of the town where there had been no cases of this disease since the Infectious Disease (Notification) Act has been in operation, and who developed the disease 15 days after arrival ; the case could not be traced to any definite source, but it subsequently transpired that the child's mother had the diphtheria bacillus in her throat, and she may have been harbouring it for some considerable time and communicated it to the child.

2. Nine cases (4 fatal) in 9 households were possibly the direct result of school assemblage, and four schools appeared to be implicated in the distribution of the disease, viz., St. Matthew's Infants', St. Matthew's Girls', East Road Girls', and King Street Infants'. Four of the cases were directly connected with St. Matthew's Infants' School, and four indirectly by means of another member of the family attending the school, who may have been

the channel of infection, or by means of the Sunday School gathering which takes place in the same building. Two of these latter cases attended St. Matthew's Girls' and East Road Girls' School respectively. With regard to the one case attending King Street Infants' School, the source of infection could not be clearly traced to any original source.

3. Four cases (1 fatal) in four households were attributable to social intercourse with a previously infected family.

4. Three cases in three households were notified as Diphtheria, but the diagnosis was not substantiated by the bacterial examination.

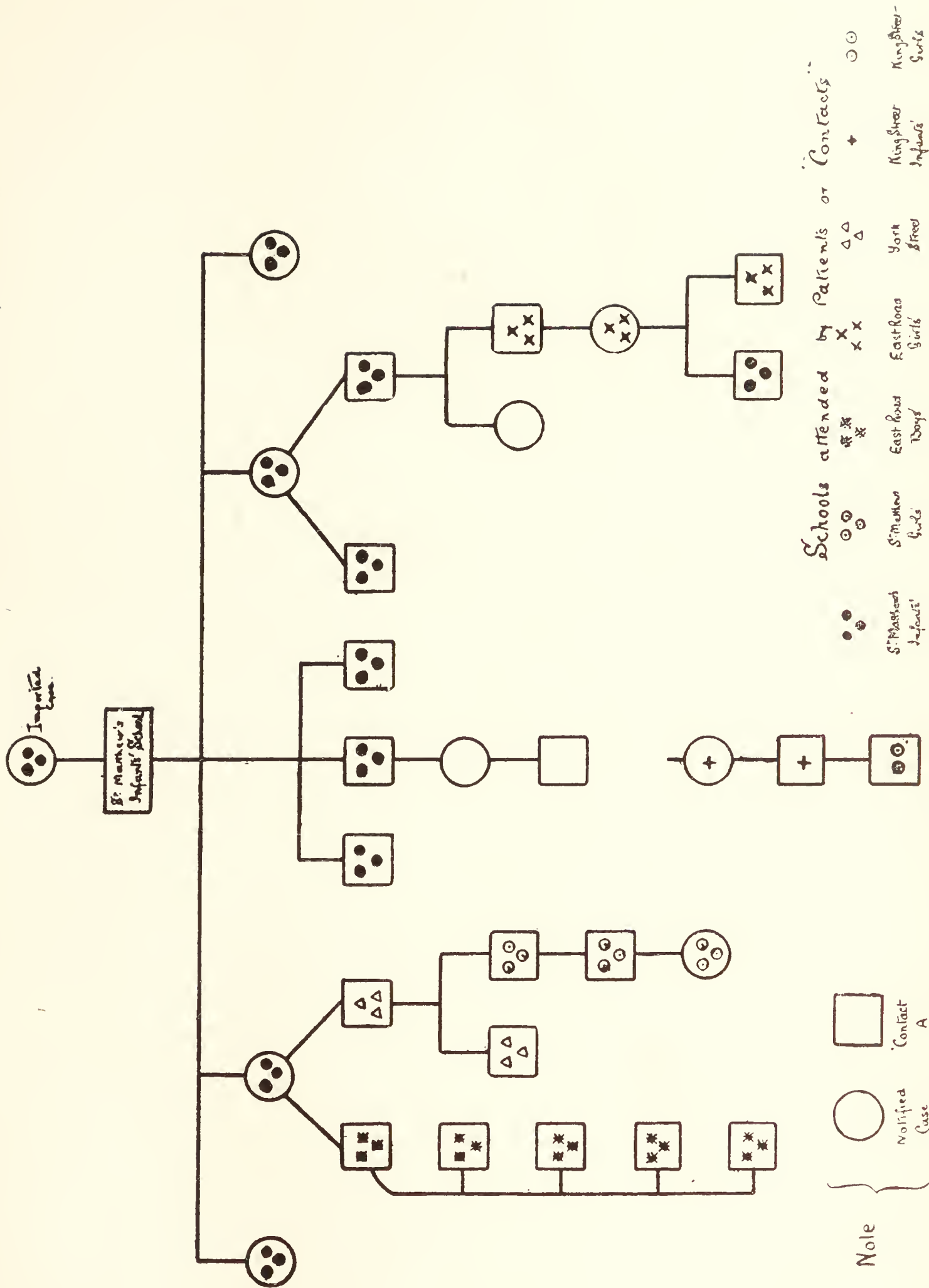
5. Three cases in two households were secondary cases in households already assailed.

6. Twelve cases (3 fatal) in twelve households were undoubted cases, but could not be connected one with the other or with any other known case.

7. Two cases were those of patients in Addenbrooke's Hospital who had been already for some time in that institution for treatment of some other ailment; the mode of introduction of the disease into the Institution may have been by visitors, but no reliable facts could be elicited.

The sequence of the school cases is illustrated by the subjoined chart.

On the appearance of the disease in a school rubbings of the throats of the class mates and all known "contacts" were at once taken for bacterial examination. The number of persons connected with sixteen several schools so examined reached six hundred and eighty-nine with the result that thirty-seven were found to be harbouring the Diphtheria bacillus.



Of the thirty-nine cases notified, in thirty-five instances the diagnosis was confirmed by bacterial examination. During the year rubbings from the throats of one thousand and seventy-four persons have been bacteriologically examined, with the result that in sixty-two (including the thirty-five mentioned above) the bacillus microscopically identical with the long diphtheria bacillus was found.

The chart facing page 14 shows the weekly incidence of the disease.

The number of cases of Diphtheria notified and the number of deaths registered in the district during each of the ten years 1894—1903 are set out in the following table :—

	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	Total.
Cases ..	7	24	8	12	29	11	63	55	16	68	293
Deaths ..	3	7	—	—	5	—	3	7	2	11	38

Mean case rate 0·76; mean mortality rate 0·09.

Ten years deaths per cent. of cases 12·9.

Scarlet Fever.

Scarlet Fever, which had prevailed so largely in the town during the previous two years, declined numerically, and is considerably below the average. The total number of cases notified during the year is sixty-six (none fatal) in fifty-two households, and is the lowest number of cases notified in any year since 1897. The case-rate per thousand of the population is 1·72.

The disease was present less or more in all the months of the year, and reached its highest curves of incidence in the first week in February and the third week in October. The smallest incidence of the disease occurred in the St. Giles' Sub-District, where there were only eight cases in six households. It may be remarked that no cases occurred in that part of this sub-district known as "Castle End."

The remaining cases were pretty evenly distributed over the area of the town. All the cases were visited and enquiries made into the circumstances, from which it would appear that ten cases in ten households were imported from without the district; only one case was due to social intercourse with a previously infected family. Two cases in two several households were probably "return cases." Eight cases in eight households were due to school assemblage. Between April 29th and June 15th eight cases in four households were found to be associated with Addenbrooke's Hospital, where the disease appears to have been accidentally introduced by visitors. One case was of doubtful character. In one case the notification was subsequently withdrawn. Ten cases were secondary cases in households already assailed, and twenty-five cases in twenty-five households could not be satisfactorily accounted for.

The chart facing page 14 shows the weekly incidence of the disease.

The number of cases of Scarlet Fever notified, and the number of deaths registered, in the district during each of the ten years 1894—1903 are set out in the following table :—

	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	Total.
Cases ..	105	52	87	52	103	157	141	74	203	284	1258
Deaths ..	3	—	5	—	—	1	2	—	3	6	20

Mean case rate 3·28; mean mortality rate 0·05.

Ten years deaths per cent. of cases 1·5.

Typhoid Fever is again much below the average of the years antecedent to the year 1902. No case had been notified from October 27th, 1903, till July 4th, 1904, when between this latter date and December 9th nine cases in eight households were

Typhoid
Fever.

notified ; equal to a case-rate per thousand of the population of 0·23.

Enquiry elicited that three of the cases in three households were of doubtful character, and in one case the negative inference was confirmed by Widal's serum test. Four cases in three households were with little doubt imported, three from Hunstanton and one from Yarmouth, as the onset of the disease in each case occurred either before arrival in Cambridge or a few days after. One case was possibly due to ingestion of shell fish ; and in one case the source of infection could not be with certainty ascertained, but the sanitary condition of the dwelling was by no means satisfactory.

The number of cases of Typhoid Fever notified and the number of deaths registered in the district during each of the ten years 1894—1903 are set out in the following table :—

	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	Total.
Cases ..	26	28	34	67	51	35	31	22	13	6	313
Deaths ..	4	3	7	8	7	1	1	3	3	1	38

Mean case rate 0·81 ; mean mortality rate 0·10.

Ten years deaths per cent. of cases 11·1.

Puerperal
Fever.

Only one case of Puerperal Fever has been notified during the year.

The number of cases of Puerperal Fever notified and the number of deaths registered in the district during each of the ten years 1894—1903 are set out in the following table :—

	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	Total.
Cases ..	2	1	3	1	2	2	3	1	1	2	18
Deaths ..	1	—	2	—	—	2	1	1	1	1	9

With regard to “ Puerperal Fever,” it may be hoped that now the practice of midwives is subject to the operation of the rules of the Central Midwives

Board established under the provisions of the Midwives Act, 1902, cases which have hitherto escaped notice may be brought under control, and that the clinical conditions included under the above heading may be reduced in number, if not altogether extinguished. One of the most useful provisions in the Statute is the provision for disinfection by the Local Authority of the clothing of any midwife, and the suspension of the midwife, if needful, after a case of "Puerperal Fever." But I am inclined to think that there should be additional provision made for the disinfection and cleansing of the lying-in room *before* and after use, and if needful the free provision of clean bedding and appliances wherever a midwife considers it necessary.

Thirty-three cases of Erysipelas have been notified during the year, equal to a case-rate per thousand of the population of 0·83. Erysipelas.

The number of cases of Erysipelas notified, and the number of deaths registered in the district during each of the ten years 1894—1903 are set out in the following table :—

	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	Total.
Cases ..	36	31	45	38	30	21	35	20	22	23	301
Deaths ..	1	—	—	—	—	—	1	2	—	—	4

Mean case rate 0·78; mean mortality rate 0·09.

Ten years deaths per cent. of cases 1·3.

No case of Cholera, Typhus Fever, Relapsing Fever, Continued Fever, or Plague has been notified during the year, or in any of the ten years 1894—1903, with the exception of Continued Fever, and three cases of this disease have been notified, viz., two in 1894 and one in 1897. Other
notifiable
Diseases.

Diarrhœa was present during March, July, August, September, October, and November, and Diarrhœa.

caused twenty-nine deaths ; this is the highest number recorded since the year 1899. The death-rate from this disease is 0·73 per thousand living, and the death-rate for England and Wales for the same period is given as 0·86.

The deaths and death-rate from Diarrhœa among persons belonging to the district during the previous twenty years are set out in the following table :—

					DEATH RATE.						DEATH RATE.
					DEATH RATE.						DEATH RATE.
1884	...	...	28	...	0·78	1894	...	...	11	...	0·29
1885	...	...	13	...	0·36	1895	...	...	28	...	0·74
1886	...	...	31	...	0·85	1896	...	...	17	...	0·44
1887	...	...	27	...	0·74	1897	...	...	24	...	0·63
1888	...	...	11	...	0·30	1898	...	...	37	...	0·96
1889	...	...	8	...	0·21	1899	...	...	43	...	1·12
1890	...	...	24	...	0·65	1900	...	...	17	...	0·44
1891	...	...	22	...	0·59	1901	...	...	21	...	0·54
1892	...	...	17	...	0·45	1902	...	...	7	...	0·18
1893	...	...	57	...	1·52	1903	...	...	6	...	0·15
Annual average for years 1884—1893					0·65	Annual average for years 1894—1903					0·55
Annual average for years 1884—1903					0·59						

Twelve deaths from Measles have been registered during the year.

Measles. The deaths and death-rate from Measles among persons belonging to the district during the previous twenty years are set out in the following table :—

					DEATH RATE.						DEATH RATE.
					DEATH RATE.						DEATH RATE.
1884	...	...	2	...	0·05	1894	...	...	25	...	0·66
1885	...	...	5	...	0·13	1895	...	...	0	...	0·00
1886	...	...	13	...	0·35	1896	...	...	0	...	0·00
1887	...	...	0	...	0·00	1897	...	...	0	...	0·00
1888	...	...	13	...	0·35	1898	...	...	35	...	0·91
1889	...	...	0	...	0·00	1899	...	...	0	...	0·00
1890	...	...	7	...	0·19	1900	..	...	1	...	0·02

					DEATH RATE.						DEATH RATE.			
					DEATHS.						DEATHS.			
1891	...	...	0	...	0'00	1901	...	...	2	...	0'05
1892	...	...	0	...	0'00	1902	...	...	44	...	1'12
1893	...	...	0	...	0'00	1903	...	...	0	...	0'00
Annual average for years						Annual average for years								
1884—1893					4'0	...	1894—1903					10'7	...	0'27

Annual average for years 1884—1903					7'3	0'19
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No deaths from Whooping Cough have been registered during the year. Whooping
Cough.

The deaths and death-rate from Whooping Cough among persons belonging to the district during the previous twenty years are set out in the following table :—

					DEATH RATE.						DEATH RATE.
					DEATHS.						DEATHS.
1884	...	...	1	...	0·02	1894	...	...	17	...	0·45
1885	...	...	14	...	0·66	1895	...	...	2	...	0·05
1886	...	...	15	...	0·41	1896	...	...	19	...	0·50
1887	...	...	10	...	0·27	1897	...	...	3	...	0·07
1888	...	...	12	...	0·32	1898	...	...	21	...	0·54
1889	...	...	13	...	0·35	1899	...	...	6	...	0·15
1890	..	...	39	...	1·06	1900	...	...	21	...	0·54
1891	...	...	21	...	0·56	1901	...	...	0	...	0·00
1892	...	...	2	...	0·05	1902	...	...	5	...	0·12
1893	...	...	9	...	0·24	1903	...	...	7	...	0·17
Annual average for years						Annual average for years					
1884—1893		13·6	...	0·37		1894—1903		10·1	...	0·26	

Annual average for years 1884—1903					11'8	0'31
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Influenza prevailed during February, May, and December, and caused seven deaths ; the death-rate from this disease is 0'17 per thousand living. The mean rate for the previous ten years is 0'26. Influenza.

 A weekly record of the Disease Incidence of the year is set out in the table on the following page :—

Week ending				Small Pox.	Chicken Pox.	Diphtheria.	Membranous Croup.	Erysipelas.	Scarlet Fever.	Enteric Fever.	Puerperal Fever.	Total.
Jan.	2	(2 days)		...	I	...	...	...	...	...	...	I
"	9	...	...	...	IO	2	...	...	4	...	...	16
"	16	...	...	...	4	...	...	...	I	...	...	5
"	23	...	...	...	19	I	...	...	3	...	...	23
"	30	...	...	...	I	...	...	I	I	...	...	3
Feb.	6	...	...	...	...	...	...	I	5	...	...	6
"	13	...	...	...	...	3	...	...	...	...	...	3
"	20	...	...	...	...	...	...	...	2	...	...	2
"	27	...	...	...	...	I	...	...	4	...	...	5
Mar.	5	...	...	...	...	...	...	...	I	...	...	I
"	12	...	...	...	...	...	...	2	4	...	...	6
"	19	...	...	...	...	I	...	...	I	...	...	2
"	26	...	...	...	...	...	...	I	I	...	...	2
April	2	...	...	...	...	...	...	...	...	...	...	...
"	9	...	...	...	...	...	...	...	...	...	...	...
"	16	...	...	...	...	I	...	...	...	...	...	I
"	23	...	...	...	...	...	...	2	...	...	...	2
"	30	...	...	...	...	...	...	...	I	...	I	2
May	7	...	...	...	...	...	...	...	...	...	...	...
"	14	...	...	...	...	I	...	3	2	...	...	6
"	21	...	...	...	...	I	...	...	2	...	...	3
"	28	...	...	...	...	...	...	...	I	...	...	I
June	4	...	...	...	...	...	...	I	I	...	...	2
"	11	...	...	...	...	3	...	...	...	...	...	3
"	18	...	...	...	...	...	...	...	I	...	...	I
"	25	...	...	...	...	...	...	...	2	...	...	2
July	2	...	...	...	...	...	...	...	...	...	...	...
"	9	...	...	...	...	...	...	...	...	I	...	I
"	16	...	...	...	...	...	...	...	I	...	...	I
"	23	...	...	...	...	...	...	...	...	I	...	I
"	30	...	...	...	...	I	...	...	...	...	...	I
Aug.	6	...	...	...	...	3	...	I	I	...	...	5
"	13	...	...	...	...	...	...	I	I	...	...	2
"	20	...	...	...	...	...	...	...	...	...	...	...
"	27	...	...	...	...	I	...	I	...	...	...	2
Sept.	3	...	...	...	...	I	...	...	...	I	...	2
"	10	...	...	...	...	I	...	...	I	...	...	2
"	17	...	...	...	...	2	...	...	...	I	...	3
"	24	...	...	...	...	...	...	...	...	I	...	I
Oct.	1	...	...	...	...	...	...	...	...	2	...	2
"	8	...	...	...	...	I	...	I	I	I	...	4
"	15	...	...	...	...	...	...	I	7	...	...	8
"	22	...	...	...	...	I	...	3	5	...	...	9
"	29	...	...	...	...	...	...	...	I	...	...	I
Nov.	5	...	...	...	...	...	...	3	I	...	...	4
"	12	...	...	...	...	4	...	I	...	...	...	5
"	19	...	...	...	...	4	...	...	...	...	...	4
"	26	...	...	...	...	2	...	...	2	...	...	4
Dec.	3	...	...	...	...	2	...	3	2	...	...	7
"	10	...	...	...	...	I	...	I	...	I	...	3
"	17	...	...	...	...	I	...	...	3	...	...	4
"	24	...	...	...	...	...	...	5	I	...	...	6
"	31	...	...	...	...	...	...	I	2	...	...	3
TOTALS				...	35	39	...	33	66	9	I	183

PHYSICAL FEATURES AND GENERAL CHARACTER OF THE DISTRICT.

The town of Cambridge is situated on the border of the Fen Land, and just below the confluence of several streams which constitute the River Cam. The river takes a sharp curve, enclosing on its right bank the larger part of the town, and having on its left a smaller and more elevated part. A small portion of the district to the East rests on chalk, and the remainder on gault, which is capped in the lower parts of the town by the gravels and alluvium ; these surface features involve peculiarities of disease incidence which have been referred to from time to time in my past reports.

Physical
Features, etc

HOUSE ACCOMMODATION.

The house accommodation of the district, especially for the working classes, is ample and of a satisfactory character, with the inevitable exceptions in an ancient town of some narrow passages and cul-de-sacs, and these are very much better than they were some years ago. The proportion of open space about the houses varies considerably in different parts of the town, and any defect in this regard is compensated for to a large extent by the numerous public gardens and recreation grounds. There is very little in Cambridge of what is known as extreme density of population. Building by-laws have been in operation in the district since the year 1889 ; these were revised during the year 1902. During the past few years a large residential area has grown up in the neighbourhood of Hills Road and Mill Road.

House
Accommo-
dation.

Unhealthy
Dwellings.

One house in Abbey Street, Old Gas Lane, and Gloucester Street respectively, and seven houses in Sun Court were reported as being filthy ; on notice from the Inspector of Nuisances the premises were cleansed.

Certain premises in the rear of Burleigh Street were reported on as being in such a ruinous condition as to be dangerous to the occupiers of the houses in that street, and the Public Health Committee directed that they should be dealt with under Section 75 of the Towns Improvement Clauses Act, 1847.

A special report was made in regard to the sanitary condition of a block of houses at the corner of East Road and New Street. A representation was made to the owner as to the alterations necessary to improve their sanitary conditions, especially with regard to through ventilation, and these requirements have been duly carried into effect by the owner.

Over-
crowding.

Twelve cases of overcrowding have been satisfactorily dealt with ; in nine instances by removal of the family to a larger dwelling, and in the remainder by the removal of some members of the household.

SEWERAGE AND DRAINAGE.

Sewerage
and Drainage.

With regard to the Sewerage and Drainage of the District, I am favoured with the following information by the Borough Engineer and Surveyor :—

“ There is a high level and low level system of sewers ; the former deals with the surface water from the various roads, streets, etc., and with the rain water from the rain water pipes in the fronts of houses which discharge their contents into the road

at about its surface level ; the latter for the sewage proper are graded from the several sewer summits in the Borough and District to a point in Barnwell to the North East of the Town, close to the river and many feet below its level, and at this place an artificial outlet is created by pumping the sewage to near the surface and forcing it through an enclosed iron pipe or rising main about two miles long, with a total lift of about 44 feet, to a sewage farm or filtration area. The effluent from this land is discharged by gravitation into the river a few yards below Baitsbite Locks."

The services of the Inspector who was appointed as a deputy in 1903, during the illness of one of the regular staff, have been retained for special drainage inspection, and the inspection of houses assailed by infectious disease.

The following is a summary of the sanitary work done during the year :—

Results of
Inspections.

New closets have been provided in connection with one house Crispin Passage and Smart's Row ; two houses Shelly Row and Staffordshire Street ; four houses St. Barnabas Road ; and eleven houses East Road.

Flushing apparatus to closets has been provided in connection with one house Abbey Street, Ainsworth Street, Bene't Street, Bridge Street, Burleigh Street, Chesterton Lane, Fitzwilliam Street, George Street, Gifford Place, Guildhall Street, Hills Road, James Street, Jesus Lane, King Street, Lensfield Road, Market Hill, Melbourne Place, Newnham Terrace, Park Terrace, Petersfield, Quay Side, Ram Yard, Russell Street, St. Andrew's Hill, and Wright's Passage ; two houses Bateman Street, Clarendon Street, King Street, Maid's Causeway,

Park Street, Queen's Court, St. Andrew's Street, Sell's Court, Sidney Street, and Staffordshire Street ; three houses Newmarket Road, Parker Street, Queen Street, Shelly Row, and Thompson's Lane ; four houses Coronation Street, Magdalene Street, Nelson Street, and Russell Cottages ; seven houses City Road ; and ten houses East Road, Gwydir Street, and Warkworth Street.

Brick and tile drains have been removed in connection with one house Bridge Street, Fitzwilliam Street, Gifford Place, Gold Street, James Street, Maid's Causeway, Melbourne Place, Newmarket Road, Newnham, Park Terrace, Pembroke Street, Quay Side, St. Andrew's Hill, and South Street ; two houses Clarendon Street, Crispin Street, Eden Street, Fitzroy Street, King Street, New Street, Park Street, Parker's Terrace, Shelly Row, Sidney Street, and Staffordshire Street ; three houses Chesterton Lane, Coldham's Lane, and Thompson's Lane ; four houses Burleigh Street, Magdalene Street, Nelson Street, and Parker Street ; five houses York Street ; six houses Gwydir Street and Paradise Street ; seven houses City Road ; fourteen houses Smart's Row ; and twenty-four houses East Road, and glazed pipe drains have been substituted in each instance.

Ventilation to drains has been provided in connection with one house Bene't Street, Bridge Street, Burleigh Street, Dorset Terrace, George Street, Gifford Place, Guildhall Street, James Street, Jesus Lane, King Street, Market Hill, Mill Road, Newmarket Road, Newnham, Norwich Street, Orchard Street, Park Terrace, Pembroke Street, Quay Side, St. Andrew's Hill, St. Andrew's Street, South Street, and York Street ; two houses Bradmore Street, Clarendon Street, Crispin Street, Fitzroy

Street, Grafton Street, King Street, Maid's Causeway, Melbourne Place, Park Street, Regent Street, Sidney Street, and Union Road ; three houses Chesterton Lane, Eden Street, Malcolm Street, Newnham Terrace, Shelly Row, and Staffordshire Street ; four houses Gold Street, Hills Road, Magdalene Street, Nelson Street, Stanley Road, and Thompson's Lane ; five houses Ainsworth Street ; six houses New Street, Paradise Street, Parker Street, Station Road, and Sturton Street ; seven houses St. John's Road ; eight houses Newmarket Road ; nine houses Coldham's Lane and Tenison Road ; fourteen houses City Road and Smart's Row ; fifteen houses Adam and Eve Row and Warkworth Street ; twenty-two houses Gwydir Street ; twenty-three houses East Road ; and thirty-one houses Staffordshire Street.

Sanitary improvements have been effected either by substitution of earthenware gully traps for bell traps, disconnection of rain water and sink waste pipes from sewer, repairing guttering, or relaying brick paving at one house Bateman Street, Bene't Street, Bridge Street, Broad Lane, Dorset Terrace, Falcon Yard, Fletcher's Yard, Fitzroy Back Lane, Fitzroy Street, Fitzwilliam Street, Gifford Place, Glisson Road, Gold Street, Guildhall Place, Herschel Road, John Street, Little St. Mary's Lane, Madingley Road, Market Hill, Mill Road, Newnham, Northampton Street, Norwich Street, Park Terrace, Pemberton Terrace, Quay Side, Ram Yard, Regent Terrace, St. Andrew's Hill, Union Road, Victoria Street, and Willow Walk ; two houses Ainsworth Street, Auckland Road, Blackmoor Head Yard, Broad Street, Burleigh Place, Burleigh Street, Castle Street, Clarendon Street, Clement Court,

Crispin Street, Coronation Street, Devonshire Road, Evan's Passage, Fitzroy Street, Gloucester Place, Gloucester Street, Gold Street, Grafton Street, James Street, Jesus Lane, King's Court, King Street, Lensfield Road, Maid's Causeway, Magdalene Street, Malcolm Street, Manor Street, Melbourne Place, Orchard Street, Park Street, Rivar Place, St. Andrew's Street, St. John's Street, St. Peter's Court, Sidney Street, Sleaford Street, Sturton Street, Union Road, and Wright's Passage ; three houses Anderson's Court, Abbey Terrace, Adam and Eve Row, Chesterton Lane, Cross Keys' Yard, Granta Place, Guildhall Street, Kettle's Yard, Lawrence's Court, Malcolm Street, Market Passage, Miller's Passage, Newnham Terrace, Park Street, Ross Street, Russell Street, St. John's Place, and Wallis's Passage ; four houses Castle Street, City Road, George Street, Gold Street, James Street, King Street, Magdalene Street, Nelson Street, Parker's Terrace, Portugal Street, Shelly Row, Tabernacle Yard, and Thompson's Lane ; five houses Argyle Street, Bateman Street, Henley Road, Hills Road, and Scroope Terrace ; six houses Burleigh Street, Parker Street, and Sturton Street ; seven houses Bradmore Street, Eden Street, Norfolk Street, Regent Street, and Station Road ; eight houses Ainsworth Street and New Street ; ten houses City Road, Coldham's Lane, and York Street ; eleven houses Newmarket Road ; fourteen houses Smart's Row ; fifteen houses Adam and Eve Row, Warkworth Street, and Stone Street ; twenty-one houses Jesus Lane ; thirty-two houses, St. Barnabas Road ; thirty-three houses, Staffordshire Street ; thirty-four houses, East Road ; forty-five houses, Gwydir Street ; and fifty-five houses, Tenison Road.

EXCREMENT DISPOSAL.

The system of excrement disposal in the Borough is almost entirely on the water carriage principle ; there is still a large number of closets that are hand flushed.

Excrement
Disposal.

REMOVAL AND DISPOSAL OF HOUSE REFUSE.

There is a regular service of house to house scavenging, and the material is carried to the refuse destructor at the Sewage Pumping Station.

Removal of
Refuse.

WATER SUPPLY.

The town is almost exclusively supplied by the Cambridge University and Town Waterworks Company. In a few instances the supply is obtained from wells, but the use of water from these for drinking purposes is gradually being discontinued.

Water
Supply.

Owing to the inadequacy or unfitness of the water supply to one house, Newmarket Road ; two houses, Russell Street ; three houses, George and Dragon Yard ; and five houses, King Street, a supply has been laid on from the Company's main.

Places over which the Council have Supervision.

(I.) SLAUGHTERHOUSES, KNACKERS, AND OTHER
OFFENSIVE TRADES.

An application for renewal of licence under the order made in respect of premises in Sturton Street has been granted by the Authority.

Slaughter-
houses, etc.

An application for licence to use certain premises in Newmarket Road as a slaughterhouse has been granted by the Authority.

All the slaughterhouses have been inspected during the year, and all have been put in thorough repair on notice from the Inspector of Nuisances.

FOOD INSPECTION.

On June 27th two hundred-weight of periwinkles were seized, and after examination were ordered by a Justice to be destroyed.

On August 16th two barrels of putrid fish at the Railway Station were destroyed by consent of the railway officials.

On October 21st three hundred-weight and a quarter of putrid beef at the Railway Station was destroyed by consent of the railway officials.

On October 25th ten stone of beef was seized, and after examination was ordered by a Magistrate to be destroyed.

(II.) FACTORIES AND WORKSHOPS.

Factories and Workshops. The Factory and Workshops Act, 1901, imposes several new and important duties on the Borough Council.

Factories.—There are four factories in the district where more than 40 persons are employed, and the examination of these premises with regard to the provision of escape in case of fire has been attended to by the Fire Brigade Committee.

Adverting to the remarks in my report for the year 1903 on underground bakehouses which had been structurally adapted to the requirements of the Regulations framed under Section 101 of the Factory and Workshops Act, the remaining four have been granted certificates.

Workshops.—During the year 132 workshops have been examined. In most instances the order of the Sanitary Authority has been readily complied with. The following is a summary of the defects observed and the remedies applied :—

Trade Workshops.	No.	Defects found to exist.	Result of Action.
Bakehouses	18	7 Uncleanliness	Premises cleansed
		1 Dilapidated floor, walls and ceiling, and no flushing apparatus to w.c.	Floor, walls, and ceiling repaired, and flushing apparatus provided
		2 Dilapidated floors	New floors provided
		2 No flushing apparatus to w.c.	Flushing apparatus provided
		2 Drains in bakehouse	Drains removed
		2 Defective drains	Drains repaired
		1 No ventilation to drains	Ventilation provided
		1 Dilapidated floor and uncleanliness	Floor repaired and premises cleansed
Bootmakers	3	1 Uncleanliness	Premises cleansed
		1 Overcrowded	Overcrowding abated
		1 Defective drains	Premises cleansed
Coachmaker	1	Closet out of order	Closet put in order
Cycle Works	1	Uncleanliness	Premises cleansed
Dressmakers	4	2 Overcrowded	Overcrowding abated
		1 Blocked drains	Drains cleared
		1 No flushing apparatus to w.c.	Flushing apparatus provided
Laundresses	6	2 Uncleanliness	Premises cleansed
		2 No flushing apparatus to w.c.	Flushing apparatus provided
		1 Uncleanliness and dilapidated paving	Premises cleansed and paving repaired
		1 Uncleanliness and dilapidated ceiling	Premises cleansed and ceiling repaired

Trade Workshops.	No.	Defects found to exist.	Results of Action.
Printers	2	1 Defective drains	New system of drainage provided
		1 No flushing apparatus to w.c.	Flushing apparatus provided
Sugar Boiler	1	Uncleanliness	Drains repaired
Tailor	1	Uncleanliness	Premises cleansed
Tailoress	1	Rain water pipe connected direct with drain	Rain water pipe disconnected
Tinman	1	Uncleanliness	Premises cleansed
Wheelwright	1	Closet out of order	Closet put in order

Outworkers.—During the year seventy lists, containing the names and addresses of six hundred and fourteen outworkers, have been received by the Authority, and seven lists, containing the names and addresses of two hundred and sixty-seven outworkers, have been forwarded to other authorities in whose district the outworkers reside.

Home Work.—It has not been necessary during the year to prohibit home work being done in any premises on account of the appearance therein of infectious disease.

Work Places.—Six work places have been inspected and found to conform to the requirements of the above Statute.

Register of Workshops.—The number of workshops on the Register amounts to 255.

(III.) COMMON LODGING HOUSES.

Common
Lodging
Houses.

By-laws with respect to Common Lodging Houses were adopted by the Borough Council on May 2nd, and sanctioned by the Local Government Board on the 25th day of the same month, and these

have been communicated to the respective owners of the nine common lodging houses in the town, together with a schedule of alterations necessary to adapt them to the new requirements.

(IV.) DAIRIES, COWSHEDS, AND MILKSHOPS.

There are in the Borough 40 cowkeepers, and 86 dairymen and milk purveyors; to this latter number must be added 23 milk purveyors who live in various parts of the county but deliver milk in the town. All dairies, cowsheds, and milkshops have been periodically inspected, and in several instances cleansing and limewashing have been carried out at the request of the Inspector of Nuisances.

(V.) CANAL BOATS.

Report under the Canal Boats Acts, 1877-1884, as required by the Local Government Board, and communicated to the Board:—

“(1) The arrangements made are that the Chief Inspector of Nuisances has been appointed, without special remuneration, to inspect the Canal Boats plying in the District.

“(2) The boats plying within the district formerly belonged to the Eastern Counties Navigation Company, and are now owned partly by Messrs. Colchester and Ball, of Burwell, and partly by the King’s Lynn Transport Company. Nine inspections have been made during the year of boats plying in the district, and all the boats inspected had complied with the regulations as to painting and other matters required by the Act.

“(3) There were no women or children on board any of the boats, and no case of infection has been notified or traced.

“(4) Number of Registered Boats plying in the district, 6.”

Nuisances.

Nuisances. Nuisances of various kinds, as indicated in the Inspector's Table in the Appendix to this Report, have been dealt with.

Methods of Dealing with Infectious Diseases.

The methods of dealing with Infectious Diseases are :—

Notifications. (a) By notification, followed by enquiry, and in this regard every house in the Town wherein a case of infectious disease has appeared, with the exception of a few instances of Erysipelas, has been visited with a view to the elucidation of the cause, or for the removal of injuriously operating conditions.

Isolations. (b) Removal of patients to the Borough Infectious Diseases Hospital, or to Addenbrooke's Hospital, respectively.—During the year forty-seven cases of Scarlet Fever (seventy-one per cent. of those notified), twenty-nine cases of Diphtheria and four cases of Typhoid Fever belonging to the Town, as well as twelve cases of Scarlet Fever belonging to the Chesterton Urban District, have been admitted into the first mentioned institution ; and one case of Diphtheria and two cases of Erysipelas have been treated at the second mentioned institution. Where the patients are not removed advice is given to the householders to carry out isolation of the cases in their own homes.

School
Closure,
etc.

(c) School closure or particular exclusion from School.—It has been necessary to recommend the

closure of the Barnwell Abbey School, British Infants' School, Catharine Street Girls' and Infants' Schools, East Road Boys', Girls' and Infants' Schools, New Street School, Occupation Road School, St. Matthew's Infants' School, Norfolk Street, St. Philip's Boys' School, and Sturton Street Infants' School, as well as several Sunday Schools, on account of the prevalence of Measles.

Orders for the exclusion from School, for varying periods, of children from infected households have been sent to the following Schools :—Barnwell Abbey School ; British Boys', Girls', and Infants' Schools ; Catharine Street Girls' and Infants' Schools ; East Road Boys', Girls', and Infants' Schools ; Higher Grade Girls' School, Eden Street ; Higher Grade Boys' School, King Street ; Higher Grade Boys' School, Paradise Street ; King Street Girls' School ; New Street School ; Park Street School ; Perse Boys' School ; St. Andrew's Roman Catholic School ; St. Barnabas' School ; St. Giles' Girls' and Infants' Schools ; St. Matthew's Girls' and Infants' Schools ; St. Paul's Boys', Girls', and Infants' Schools ; St. Philip's Boys' School ; Sturton Street Infants' School ; and York Street Boys' School.

Circulars have been sent to one hundred and twenty-two parents or guardians requesting them to refrain from sending any of their children to Day School, Sunday School, Church, Chapel, or other place of assemblage, and to keep them out of the streets as much as possible until the risk of infection is passed ; and also forty-four notices to Superintendents of Sunday Schools, requesting them to exclude the children of infected households from school till the risk of infection is passed.

Prophylactic
Measures.

(*d*) In threatened outbreaks of Diphtheria prophylactic doses of Antitoxin are recommended for the protection of all persons known to have been exposed to the chances of infection, and bacterial examination of rubbings from their throats and nasal passages is made at the Pathological Laboratory for the verification of diagnosis and for the discovery of any unsuspected case of the disease, and persons found to have the Diphtheria Bacillus are asked to submit to isolation at the Borough Isolation Home until quite free from infection.

Disinfections.

(*e*) After the removal, or at the conclusion of a case of infectious disease, the infected rooms are disinfected with either Formic Aldehyde, Sulphur, or by the Equifex Spraying Machine, and the bedding etc., is disinfected at the Steam Disinfecting Apparatus at the Pumping Station.

Tabular
Indications.

The details of the cases of Infectious Diseases notified during the year are set out in Table III., and the localities invaded are indicated on the accompanying plan of the town. The table immediately following furnishes an account in detail of the work of disinfection :—

RECORD OF DISINFECTION, 1904.

No. of Articles from each Disease:

Diphtheria.	Scarlet Fever.	Typhoid Fever.	Puerperal Fever.	Erysipelas.	
722	1,718	50	3	88	
Chicken Pox.	Measles.	Phthisis.	Septicæmia.	Syphilis.	Tetanus.
170	81	17	114	27	15
	Cancer.		Mumps.		Miscellaneous.
	35		66		73
			TOTAL.		
			3,179		
			No. of Separate Stovings,		124.

DETAILS OF ARTICLES DISINFECTED.

Beds.	Bolsters.	Blankets.	Clothing.	Cushions.
71	81	409	1,486	33
Mattresses.		Miscellaneous.		Palliasses.
	221	264		57
	Pillows.	Quilts.	Sheets.	
	402	83	72	

ROOMS FUMIGATED.

Diphtheria.	Scarlet Fever.	Typhoid Fever.	Chicken Pox.
58	137	3	36
Phthisis.	Measles.	Miscellaneous.	Puerperal Fever.
5	27	9	1
	Erysipelas.		
	4		
	TOTAL.		
	280		

Drains Disinfected, 15.

Sale of Food and Drugs Acts, 1875—1899.

A copy of the Report of the Public Analyst for the Borough of Cambridge upon articles analysed by him under the above Acts for the year ended 31st December, 1904.

Adulteration
of Food.

Samples.	By whom submitted.	Result of Analysis.	Remarks.
6 milks ... 3 peppers ... 3 sugars 3 oatmeals 3 flours 3 cornflours 2 tapiocas 1 sago	Inspector W. T. Taylor, an officer appointed by the Town Council.	All the samples were genuine	

Samples.	By whom inspected.	Result of Analysis.	Remarks.
9 milks 1 separated milk 21 butter 5 ice cream 6 whisky 5 gin 4 rum 4 bread 3 sugar 3 pepper 3 oatmeal 3 tapioca 8 lard 2 macaroni	Inspector W. T. Taylor, an officer appointed by the Town Council.	<p>Three samples of milk were deficient in milk fat to the extent of 3, 7, and 15 per cent. respectively.</p> <p>Two samples of gin were adulterated with water to the extent of $2\frac{1}{2}$ per cent. and 3 per cent. respectively.</p> <p>All the four samples of rum were adulterated with water to the extent of 3, $3\frac{1}{2}$, 11 and 30 per cent. respectively.</p> <p>One sample of butter was composed entirely of margarine.</p> <p>All the other samples were genuine.</p>	<p>Proceedings were taken against the vendor of the milk which was 15 per cent. deficient, but the case was dismissed on a warranty.</p> <p>No proceedings were taken against the Vendors of the other adulterated samples most of them having been purchased in an informal manner.</p>
11 milk 5 bread 5 flour 1 rice flour 4 gin 3 rum 1 whisky	By officers appointed by the Town Council.	<p>Two samples of gin were each adulterated with 4 per cent. of water.</p> <p>Two samples of rum with 7 per cent. and 10 per cent. respectively.</p> <p>Four samples of milk were deficient in milk fat to the extent of 3, 4, 11 and 14 per cent. respectively.</p>	No proceedings were taken, but the Vendors of the adulterated samples were cautioned.
10 milks 2 butter 4 bread 4 sugar 3 arrowroot 4 oatmeal	Inspector W. T. Taylor, an officer appointed by the Town Council.	All the samples were genuine.	

REPORT ON INFECTIOUS DISEASES HOSPITAL.

The institution now consists of one block for Scarlet Fever patients, a set of separate rooms for doubtful cases, one block for Typhoid Fever patients, and one at some considerable distance from the other blocks for Diphtheria patients, an administrative block, a block available for private patients suffering from Scarlet Fever, a laundry, and a mortuary, etc.

The hygienic value of the institution in the arrest of disease has been evident, notwithstanding the doubts expressed in medical journals as to the value of such institutions.

The house engaged as an Isolation Home for Diphtheria "contacts" has been utilised twice during the year, five patients being treated there on the first occasion, and twenty patients on the latter occasion.

Mr. F. E. Apthorpe Webb has been appointed Medical Attendant of both Institutions.

The following table gives a summary of admissions to and discharges from the Infectious Diseases Hospital during the year, as entered in the Hospital books.

Patients remaining in Hospital on December 31, 1903 :—

Scarlet Fever ...	...	18
Diphtheria ...	...	4
		—
		22

Patients admitted during the year :

Scarlet Fever ...	...	59*
Diphtheria ...	...	29
Typhoid Fever ...	...	4
		—
		92

Patients discharged during the year :

Scarlet Fever ...	...	60
Diphtheria ...	...	23
Typhoid Fever ...	...	3
		—
		86

DEATHS.

Diphtheria	7
----------------	-----	---

Patients remaining in Hospital, Dec. 31, 1904 :

Scarlet Fever ...	...	17
Diphtheria ...	...	3
Typhoid Fever ...	...	1
		—
		21

G. W. died of Diphtheria after being in Hospital nine days.

A. S. died of Diphtheria after being in Hospital thirty days.

A. C. died of Diphtheria after being in Hospital five days.

J. T. died of Diphtheria after being in Hospital one day.

P. S. died of Diphtheria after being in Hospital three days.

C. L. died of Diphtheria after being in Hospital thirteen days.

E. C. died of Diphtheria after being in Hospital three days.

* This number includes twelve cases of Scarlet Fever belonging to the Chesterton Urban District.

The following table has been constructed to show the number of cases which have been admitted since the establishment of the Hospital and the mortality which has occurred.

Year.	Small Pox.		Diphtheria.		Scarlet Fever.		Typhus Fever.		Typhoid Fever.		Erysipelas.		Measles.		Indefinite.		Total.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1886	2	...	1	...	1	...	...	...	...	...	1	...	...	...	...	...	5	...
1887	...	...	15	3	6	...	...	...	...	...	1	...	...	...	1	...	23	3
1888	...	...	2	...	2	...	...	...	...	...	1	...	1	...	...	...	6	...
1889	...	...	4	1	13	...	...	...	1	...	1	...	2	...	...	...	21	1
1890	...	...	5	1	15	1	...	...	...	...	1	1	...	...	...	...	21	3
1891	...	...	2	...	11	1	...	...	12	2	...	...	...	...	...	...	25	3
1892	3	...	1	...	27	...	...	...	1	...	...	...	3	...	...	...	36	...
1893	5	...	...	...	81	1	1	...	3	1	...	...	...	2	...	...	91	2
1894	1	...	2	1	65	2	...	...	...	...	...	...	...	...	...	...	68	3
1895	1	...	4	1	34	...	...	...	...	...	...	...	...	...	...	...	44	1
1896	1	...	2	...	62	4	...	...	5	...	...	...	...	...	...	...	69	5
1897	...	...	3	...	41	...	...	...	4	1	...	...	...	...	...	...	66	1
1898	...	...	11	2	76	...	...	...	22	1	1	...	2	...	...	...	101	6
1899	...	...	2	1	120	1	...	...	11	4	...	...	...	...	...	...	122	2
1900	...	...	...	...	118	1	...	...	...	...	...	...	...	...	...	...	119	1
1901	..	...	13	...	61	...	...	...	1	...	...	...	...	...	...	...	78	...
1902	...	*1	4	...	183	2	...	...	4	2	...	...	...	...	...	...	193	5
1903	...	...	39	7	248	5	...	...	...	...	...	...	...	...	...	...	287	12
1904	...	...	29	7	59	...	...	...	4	...	...	...	...	...	...	...	92	7

* Admitted as a case of Scarlet Fever.

TABLE I.

For the Whole District of Cambridge.

Table showing Vital Statistics for the year 1904 and the antecedent ten years.

YEAR.	Population estimated to Middle of each year.	BIRTHS.		TOTAL DEATHS REGIS- TERED IN THE DISTRICT.				TOTAL DEATHS IN PUBLIC INSTITUTIONS IN THE DISTRICT.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	NETT DEATHS AT ALL AGES BELONGING TO THE DISTRICT.	
				UNDER ONE YEAR OF AGE.		AT ALL AGES.					Number.	Rate.*
		Number.	Rate.*	Number.	Rate per 1,000 Births registered.	Number.	Rate.*					
1	2	3	4	5	6	7	8	9	10	11	12	13
1894.....	37488	934	24·9	119	127	604	16·1	113	44	7	567	15·1
1895	37680	972	25·7	142	146	628	16·6	109	47	3	584	15·5
1896.....	37857	932	24·6	116	124	591	15·6	112	40	10	561	14·8
1897.....	38042	939	24·6	125	133	551	14·4	136	52	11	510	13·4
1898.....	38228	884	23·1	142	160	617	16·1	112	36	9	590	15·4
1899.....	38416	869	22·6	122	140	587	15·2	148	58	16	545	14·1
1900.....	38607	923	23·9	128	138	657	17·0	138	58	9	608	15·7
1901.....	38732	794	20·5	107	134	577	14·8	145	59	9	527	13·6
1902.....	38968	842	21·6	121	143	606	15·5	133	60	11	557	14·2
1903.....	39157	884	22·5	99	111	578	14·7	142	56	19	541†	13·8
Averages for years 1894—1903.	38317	897	23·3	122	136	600	15·6	128	51	10	559	14·5
1904.....	39347	819	20·8	113	138	597	15·1	155	61	14	550	13·9

* Rates calculated per 1,000 of estimated population.

† This number includes ten deaths of persons not belonging to the district, but does not include two deaths of persons belonging to the district, owing to death having taken place elsewhere than in a Public Institution.

NOTE.—The deaths included in Column 7 of this table are the whole of those registered during the year as having actually occurred within the district or division. The deaths included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term “Non-residents” is meant persons brought into the district on account of sickness or infirmity and dying in Public Institutions there; and by the term “Residents” is meant persons who have been taken out of the district on account of sickness or infirmity and have died in Public Institutions elsewhere.

The Public Institutions taken into account for the purposes of this and the following Tables are Addenbrooke’s Hospital, Infectious Diseases Hospital, and Union Workhouse, Cambridge, and the County Asylum, Fulbourn, Cambs.

Area of District in acres (exclusive of area covered by water)	3,210.	
Total population at all ages.....	38,379	} At Census of 1901.
Number of inhabited houses.....	8,700	
Average number of persons per house.....	4·4	

TABLE II.
Cambridge District and its Divisions.

Table showing Estimated Population, Births, Corrected Deaths at all ages and Infant Mortality for the year 1904 and the antecedent ten years.

NAMES OF LOCALITIES.	1 Whole District.				2 St. Andrew the Less.				3 St. Andrew the Great.				St. Giles.			
YEAR.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.
1894.....	37488	934	567	118												
1895.....	37680	972	584	141												
1896.....	37857	982	561	111	Information not obtainable.				Information not obtainable.				Information not obtainable.			
1897.....	38042	989	510	118												
1898.....	38228	884	590	141												
1899.....	38416	869	545	118												
1900.....	38607	928	608	122	28281	778	442	106	6309	76	109	8	4017	69	57	
1901.....	38732	794	527	101	28519	681	387	90	6190	46	76	5	4023	67	64	
1902.....	38968	842	557	114	28814	697	408	94	6112	71	90	10	4042	74	59	10
1903.....	39157	884	541	96	29105	736	414	78	5994	67	74	10	4058	81	53	
Averages of years 1894—1903..	38317	897	559	118												
1904.....	39347	819	550*	107	29399	702	418	91	5874	56	77	6	4074	61	55	10

* This number includes ten deaths of persons not belonging to the district, but does not include two deaths of persons belonging to the district, owing to death having taken place elsewhere than in a public institution.

NOTES.—(a) The separate localities adopted for this table are areas of which the populations are obtainable from the census returns. Block 1 is used for the whole district, and blocks 2, 3 and 4 for the several localities.

(b) Deaths of residents occurring in Public Institutions beyond the district are included in sub-columns of this table, and those of non-residents registered in Public Institutions in the district are excluded.

(c) Deaths of residents occurring in public institutions whether within or without the district, are allotted to the respective localities, according to addresses of the deceased.

* * The information required by Note (b) and (c) is not obtainable for the sub-districts 2, 3 and 4 for the years 1894—1896.

TABLE III.

Cambridge District and its Divisions.

Cases of Infectious Disease notified during the Year 1904.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.						TOTAL CASES NOTIFIED IN EACH LOCALITY.			No. of CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.		
	At all Ages.	At Ages—Years.					1 St. Andrew the Less.	2 St. Andrew the Great.	3 St. Giles.	1 St. Andrew the Less.	2 St. Andrew the Great.	3 St. Giles.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.						
Smallpox .. ..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera .. ..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	39	..	5	25	6	3	28	7	4	21	6	2
Membranous Croup .. ..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas.. ..	33	..	2	..	8	22	31	2	..	..	..	..
Scarlet Fever	66	..	19	32	14	1	44	14	8	30	10	7
Typhus Fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	9	..	..	4	2	3	5	3	1	3	1	..
Relapsing Fever.. ..	..	..	..	..	..	..	..	..	..	..	..	..
Continued Fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	1	..	..	..	..	1	1	..	..	..	..	..
Plague .. ..	..	..	..	..	..	..	..	..	..	..	..	..
Chicken Pox	35	3	16	15	1	..	31	4	..	..	..	..
Totals	183	3	42	76	31	30	140	30	13	54	17	9

NOTES.—The localities adopted for this table are the same as those in Tables II. and IV.

In addition to the Town cases there have been twelve cases of Scarlet Fever belonging to the Chesterton Urban District treated at the Infectious Diseases Hospital.

Besides those cases removed into the Borough Infectious Diseases Hospital, one case of Diphtheria and two cases of Erysipelas belonging to the Chesterton Rural District were medically treated in Addenbrooke's Hospital.

The Borough Infectious Diseases Hospital is situated in the St. Andrew the Less Sub-District, and the Small Pox Hospital is situated in the Parish of Cherryhinton, in the Chesterton Rural District.

TABLE IV.
Cambridge District and its Divisions.
Causes of and ages at Death during the Year 1904.

CAUSES OF DEATH.	DEATHS IN OR BELONGING TO THE WHOLE DISTRICT AT SUBJOINED AGES.							DEATHS IN OR BELONGING TO LOCALITIES (AT ALL AGES).			TOTAL DEATHS IN PUBLIC INSTITUTIONS IN THE DISTRICT.
	All ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	St. Andrew the Less.	St. Andrew the Great.	St. Giles.	
1	2	3	4	5	6	7	8	9	10	11	12
Smallpox .. ..	..	..	..	..	..	..	..	..	..	..	..
Measles	12	3	8	1	..	..	..	11	..	1	..
Scarlet Fever .. ..	..	..	..	..	..	..	..	..	..	..	..
Whooping Cough .. .	..	..	..	..	..	..	..	..	..	..	..
Diphtheria and Membranous Croup	9	..	3	6	..	..	..	8	1	..	7
Croup	1	1	..	..	..	..	..	..	1	..	..
Fever { Typhus .. ..	..	..	..	..	..	..	..	..	..	..	..

Epidemic Influenza ..	7	..	..	..	1	3	3	5	2	..	..
Cholera .. ..	..	..	..	..	..	..	..	..	..	..	..
Plague .. ..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea. (See notes at back.)	29	22	3	..	..	..	4	27	2	..	3
Enteritis. (See notes at back.)	1	1	..	..	..	..	..	1	..	..	..
Puerperal Fever .. ..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas .. ..	..	..	..	..	..	..	..	..	..	..	..
Other septic diseases ..	4	..	..	2	1	1	..	4	..	..	6
Phthisis	38	1	..	6	7	20	4	29	5	4	6
Other tubercular diseases..	18	5	4	1	2	6	..	14	2	2	6
Cancer, malignant disease	44	..	..	1	..	23	20	34	6	4	22
Bronchitis	45	9	3	..	..	8	25	31	9	5	1
Pneumonia	31	6	6	..	1	8	10	20	7	4	11
Pleurisy	3	..	..	..	1	1	1	3	..	..	1
Other diseases of Respiratory organs	1	..	..	..	..	1	..	1	..	..	..
Alcoholism. Cirrhosis of liver	1	..	..	..	..	1	..	1	..	..	..
Venereal diseases .. .	..	..	..	..	..	..	..	..	..	..	..
Premature birth	17	17	..	..	..	..	..	12	1	4	..
Diseases and accidents of Parturition	1	..	..	..	..	1	..	..	..	1	..
Heart diseases	55	1	..	1	3	19	31	42	8	5	8
Accidents	17	5	1	2	1	4	4	15	..	2	8
Suicides	4	..	..	..	..	3	1	2	1	1	..
Malarial Fever	1	..	..	..	..	1	..	..	1	..	..
Not certified	1	..	..	..	..	..	1	..	..	1	..
All other causes	210	36	3	5	11	54	101	158	31	21	76
All causes	550*	107	31	25	28	154	205	418	77	55	155

See Notes on next page.

* This number includes ten deaths of persons not belonging to the district, but does not include two deaths of persons belonging to the district, owing to death having taken place elsewhere than in a Public Institution.

NOTES TO TABLE IV.

- (a) All deaths of "Residents" occurring in public institutions, whether within or without the district, are included with the other deaths in the columns for the several age groups (columns 2—8). They are also, in columns 9—11, included among the deaths in their respective "Localities" according to the previous addresses of the deceased as given by the Registrars, and Deaths of "Non-residents" occurring in public institutions in the district are excluded.
- (b) See notes on Table I. as to the meaning of "Residents" and "Non-residents," and as to the Public Institutions taken into account for the purposes of these Tables.
- (c) All deaths occurring in public institutions situated within the district, whether of "Residents" or of "Non-residents," are, in addition to being dealt with as in note (a), entered in the last column of this Table.
- (d) Under the heading of "Diarrhœa" are included deaths certified as from diarrhœa alone, or in combination with some other cause of ill-defined nature; and also deaths certified from—
Epidemic enteritis;
Zymotic enteritis;
Epidemic diarrhœa. Summer diarrhœa;
Dysentery and dysenteric diarrhœa;
Choleraic diarrhœa, cholera, cholera nostras (in the absence of Asiatic cholera).

Under the heading of "Enteritis" are included those certified as from Gastro-enteritis, Muco-enteritis and Gastric catarrh, unless, from information obtained by enquiry from the certifying practitioner or otherwise, the Medical Officer of Health has reason for including such deaths, especially those of infants, under the specific term "Diarrhœa." Deaths from diarrhœa secondary to some other well-defined disease are included under the latter.

Under the headings of "Puerperal Fever" and "Cancer" are included all registered deaths from causes comprised within these general terms.

TABLE V.
Cambridge District.
Comparison of Prevalence of Sickness and Death from Infectious Diseases corrected by the exclusion
of "Non-Residents."

(Rates calculated per 1,000 persons, on the population estimated to the middle of each year.)

YEAR.	Small Pox.		Diphtheria, Membranous Group.		Erysipelas.		Scarlet Fever.		Typhus Fever.		Enteric and Continued Fevers.		Puerperal Fever.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1894.....	0·05	0·00	0·18	0·08	0·96	0·02	2·80	0·08	0·00	0·00	0·74	0·10	0·05	0·02
1895.....	0·02	0·00	0·63	0·18	0·82	0·00	1·38	0·00	0·00	0·00	0·74	0·08	0·02	0·00
1896.....	0·02	0·00	0·21	0·00	1·18	0·00	2·29	0·13	0·00	0·00	0·87	0·18	0·08	0·05
1897.....	0·00	0·00	0·31	0·00	0·99	0·00	1·36	0·00	0·00	0·00	1·76	0·23	0·02	0·00
1898.....	0·00	0·00	0·75	0·13	0·78	0·00	2·69	0·00	0·00	0·00	1·33	0·18	0·05	0·00
1899.....	0·00	0·00	0·28	0·00	0·54	0·00	4·08	0·02	0·00	0·00	0·91	0·02	0·05	0·05
1900.....	0·00	0·00	1·63	0·07	0·90	0·02	3·65	0·05	0·00	0·00	0·80	0·02	0·07	0·02
1901.....	0·00	0·00	1·42	0·18	0·49	0·05	1·88	0·00	0·00	0·00	0·56	0·07	0·02	0·02
1902.....	0·05	0·02	0·41	0·05	0·56	0·00	5·23	0·07	0·00	0·00	0·33	0·07	0·02	0·02
1903.....	3·93	0·38	1·73	0·28	0·58	0·00	7·25	1·53	0·00	0·00	0·15	0·02	0·05	0·02
Average for years 1894—1903..	0·36	0·04	0·76	0·09	0·78	0·01	3·28	0·05	0·00	0·00	0·83	0·10	0·04	0·02
1904.....	0·00	0·00	0·99	0·22	0·83	0·00	1·67	0·00	0·00	0·00	0·22	0·00	0·02	0·00

TABLE VI

Cambridge District.

Report of the Sanitary Work Completed during the year 1904 by the Inspectors of Nuisances.

INSPECTORS.	No. of Complaints received during the Year.	No. of Houses, Premises, etc. Inspected.	No. of Re-inspections of Houses, Premises, etc.	Results of Inspections		House Drains.		Waterclosets, Majority hand-flushed.		Dung Pits.		MISCELLANEOUS.								Legal Prod's: i.e. Summonses.	Samples of Water taken for Analysis.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
				Orders issued for Sanitary Amendments of Houses and Premises.	Houses, Premises, &c., Cleansed, Repaired, Whitewashed, &c.	Repaired, Cleansed, Trapped, &c.	Ventilated.	Waste Pipes connected with Drains, &c., abolished.	Repaired, &c.	Supplied with Water.	New provided.	Repaired, Covered, &c.	Unwholesome Houses reported.	Overcrowding.	Removal of Accumulations of Dung, Stagnant Water, Animal and other Refuse.	Animals removed, being im-	Regularly Inspected.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

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